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I CLAIM:

- 2 1. A tire rim temperature sensor comprising:
 - 3 a wheel weight format housing having a rim
 - 4 temperature sensor therein;
 - 5 a clip on the housing suited for mounting on a
 - 6 wheel rim; and
 - 7 the sensor including a transmitter to send a
 - 8 temperature signal remotely.
- 9 2. The sensor of claim 1 further comprising a battery.
- 10 3. The sensor of claim 2, wherein the battery can be
- 11 replaced without a removal of a tire affixed to the
- 12 rim.
- 13 4. The sensor of claim 3 further comprising a signal
- 14 conditioning unit, a processor unit, a memory and an
- 15 antenna.
- 16 5. The sensor of claim 4 further comprising a receiver.
- 17 6. The sensor of claim 4, wherein the memory further
- 18 comprises a unit identifying code.
- 19 7. A tire rim temperature sensor comprising:
 - 20 a housing mountable to a surface of a tire rim;
 - 21 a rim temperature sensor incorporated into the
 - 22 housing; and
 - 23 a transmitter to send a temperature signal
 - 24 remotely.
- 25 8. The sensor of claim 7 further comprising a weld
- 26 attachment to a rim.

- 1 9. The sensor of claim 7 further comprising a bond
- 2 attachment to a rim.
- 3 10. The sensor of claim 7 further comprising an attachment
- 4 to an inside a tire surface of the rim.
- 5 11. The sensor of claim 10 further comprising an air
- 6 temperature sensor.
- 7 12. The sensor of claim 10 further comprising a tire air
- 8 pressure sensor.
- 9 13. A tire rim temperature sensor comprising:
 - 10 a housing suited to fit into a hole in a tire rim;
 - 11 a rim temperature sensor associated with the
 - 12 housing; and
 - 13 a transmitter associated with the housing.
- 14 14. The sensor of claim 13 further comprising an air
- 15 temperature sensor.
- 16 15. The sensor of claim 13 further comprising a tire air
- 17 pressure sensor.
- 18 16. A method to detect a high temperature tire condition,
- 19 the method comprising the steps of:
 - 20 affixing a rim temperature sensor to a tire rim;
 - 21 receiving a temperature signal form the sensor; and
 - 22 processing the rim temperature signal to determine
 - 23 an alarm condition.
- 24 17. The method of claim 16 further comprising the steps of:

1 receiving a plurality of temperature signals from a
2 plurality of tire rims, each tire rim having a
3 rim temperature sensor; and
4 comparing the relative tire rim temperatures to
5 determine an alarm condition.

6 18. The method of claim 16 further comprising the step of
7 comparing the temperature signal to a stored constant
8 to determine the alarm condition.

9 19. The method of claim 16 further comprising the step of
10 comparing the temperature signal to a historic log to
11 determine the alarm condition.

12 20. A tire safety alarm system comprising:
13 a rim temperature sensor on each tire rim of a
14 vehicle;

15 said rim temperature sensors having a transmitter
16 to send a temperature signal to an on board
17 computer;

18 said on board computer having alarm logic including
19 a comparative tire rim temperature algorithm;
20 and

1 wherein any tire rim that overheats triggers an
2 alarm.

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